

Claims 28-52 have been amended. Claim 53 is newly-presented. Support for newly-presented Claim 53 may be found at least at, for example, page 16, lines 1-15 of the specification as originally filed. No new matter has been added.

Claims 28, 30-34, 38, 39, and 41- 48 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,631,988 (Swirhun, et al.). Claims 29, 37, 40, and 49-52 are rejected under 35 U.S.C. §103(a) as being obvious over Swirhun, et al. Claim 35 stands rejected under 35 U.S.C. § 103(a) as being obvious over Swirhun, et al. in view of U.S. Patent No. 5,774,614 (Gilliland, et al.) These rejections are respectfully traversed.

Independent Claims 28, 42-44, and 53 recite, inter alia, that the optical transmission means and the optical device are fixed such that said optical transmission means is optically coupled to the optical device. However, Applicant respectfully submits that neither Swirhun, et al. nor Gilliland, et al., alone or in combination, assuming, arguendo, that the documents could be combined, discloses or suggests at least the above-discussed claimed feature of independent Claims 28, 42-44, and 53. Indeed, attention is directed to column 7, lines 13-14 of Swirhun, et al., where it is explained that “[t]he fiber connector can be easily attached to or detached from the optoelectronic board.” Thus, those components clearly are not fixed, and for at least this reason, the asserted citations do not render independent Claims 28, 42-44, and 53 obvious.

Also, the Office Action does not identify teachings that would motivate one of ordinary skill in the art to combine these asserted citations.


In view of the foregoing, Applicant submits that the independent claims patentably define the present invention over the citations of record. Further, the dependent claims should also be allowable for the same reasons as the base claims and further due to

the additional features that they recite. Separate and individual consideration of each of the dependent claims is respectfully requested.

Applicant submits that this Amendment After Final Rejection clearly places the subject application in condition for allowance. This Amendment was not earlier presented because Applicant believed that the prior Amendment placed the subject application in condition for allowance. Accordingly, entry of the instant Amendment as an earnest attempt to advance prosecution and reduce the number of issues, is requested under 37 C.F.R. § 1.116.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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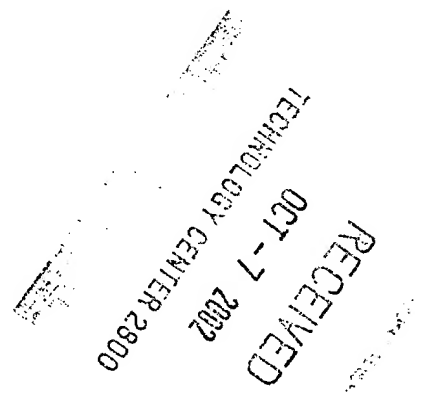


Application No: 09/627,448  
Attorney Docket No.: 03560.002625 (35.G2625)

**VERSION WITH MARKINGS TO SHOW CHANGES MADE TO THE CLAIMS**

28. (Amended) An optical wiring [connecting] device comprising:  
an electric connecting portion;  
optical transmission means for transmitting an optical signal; and  
an optical device that conducts an optoelectric conversion, said optical  
device comprising at least a surface optical device and being disposed between said electric  
connecting portion and said optical transmission means, [; and]  
wherein [an optical coupling portion disposed between] said optical  
transmission means and said optical device are fixed such that said optical transmission means is  
optically coupled to said optical device, and [, said optical coupling portion being built in said  
optical device,  
wherein] said electric connecting portion is detachable.

29. (Amended) An optical wiring [connecting] device according to claim  
28, wherein said optical device includes a light emitting device and a light receiving device,  
which light receiving device is a p-i-n photodiode or a metal-semiconductor-metal (MSM)  
photodiode.



30. (Amended) An optical wiring [connecting] device according to claim 28, wherein said optical device has a plurality of surface optical devices with independent electrodes mounted in a flip-chip manner.

31. (Amended) An optical wiring [connecting] device according to claim 28, wherein an integrated electronic circuit device that drives said optical device is disposed in said optical connecting device.

32. (Amended) An optical wiring [connecting] device according to claim 28, wherein said optical device is a surface emitting device having multi-layer reflective mirrors.

33. (Amended) An optical wiring [connecting] device according to claim 28, wherein said optical transmission means includes a metal wiring.

34. (Amended) An optical wiring [connecting] device according to claim 33, wherein the metal wiring is formed as a wiring pattern.

35. (Amended) An optical wiring [connecting] device according to claim 28, wherein said optical device is driven by a CMOS buffer of an external apparatus connected to said electric connecting portion.

36. (Amended) An optical wiring [connecting] device according to claim 28, wherein said electric connecting portion includes a recessed electric coupler.

37. (Amended) An optical wiring [connecting] device according to claim 28, wherein a plate having a window is disposed between said optical device and said optical transmission means and the window has a lens.

38. (Amended) An optical wiring [connecting] device according to claim 28, wherein said optical device is prepared by a process comprising the steps of forming an active layer on a substrate and removing said substrate.

39. (Amended) An optical wiring [connecting] device according to claim 28, wherein said optical transmission means comprises a single mode fiber.

40. (Amended) An optical wiring [connecting] device according to claim 28, wherein said optical transmissions means is fixed in said optical connecting device by V-shaped grooves on a silicon substrate.

41. (Amended) An optical wiring [connecting] device according to claim 28, wherein said optical transmission means comprises a waveguide sheet in which waveguide cores are arranged in an array.

42. (Amended) An optical wiring [connecting] device comprising:  
an electric connecting portion;  
optical transmission [transmissions] means for transmitting an optical  
signal; and  
an optoelectric converting portion, said optoelectric converting portion  
including a plurality of surface emitting devices and a plurality of surface receiving devices and  
being disposed between said electric connecting portion and said optical transmission means, [;  
and]  
wherein [an optical coupling portion disposed between] said optical  
transmission means and said optoelectric converting portion are fixed such that said optical  
transmission means is optically coupled to said optoelectric converting portion, and [optical  
device, said optical coupling portion being built in an optical connecting device,  
wherein] said electric connecting portion is detachable.

43. (Amended) An optical wiring [connecting] device comprising:  
an electric connecting portion;  
optical transmission means for transmitting an optical signal; and  
an optoelectric converting portion, said optoelectric converting portion  
including a plurality of surface optical devices arranged in a two-dimensional array and being  
disposed between said electric connecting portion and the optical transmission means, [; and]

wherein [an optical coupling portion disposed between] said optical transmission means and said optoelectric converting portion are fixed such that said optical transmission means is optically coupled to said optoelectric converting portion, and [surface optical devices, said optical coupling portion built in an optical connecting device, wherein] said electric connecting portion is detachable.

44. (Amended) An optical wiring [connecting] device comprising:  
an electric connecting portion;  
optical transmission means for transmitting an optical signal; and  
an optoelectric converting portion, said optoelectric converting portion including at least a surface optical device and through-hole and being disposed between said electric connecting portion and said optical transmission means, [; and]

wherein [an optical coupling portion disposed between] said optical transmission means and said optoelectric converting portion are fixed such that said optical transmission means is optically coupled to said optoelectric converting portion, and [surface optical device, said optical coupling portion built in an optical connecting device, wherein] said electric connecting portion is detachable.

45. (Amended) An electronic device comprising an optical [connecting] wiring device according to claim 28 to connect at least first and second boards.

46. (Amended) An electronic device comprising an optical [connecting] wiring device according to claim 42 to connect at least first and second boards.

47. (Amended) An electronic device comprising an optical [connecting] wiring device according to claim 43 to connect at least first and second boards.

48. (Amended) An electronic device comprising an optical [connecting] wiring device according to claim 44 to connect at least first and second boards.

49. (Amended) An electronic device comprising a display, a computer, and a connecting means for [connecting] wiring said display and said computer, wherein said connecting means comprises an optical connecting device according to claim 28.

50. (Amended) An electronic device comprising a display, a computer, and a connecting means for [connecting] wiring said display and said computer, wherein said connecting means comprises an optical connecting device according to claim 42.

51. (Amended) An electronic device comprising a display, a computer, and a connecting means for [connecting] wiring said display and said computer, wherein said connecting means comprises an optical connecting device according to claim 43.



52. (Amended) An electronic device comprising a display, a computer, and a connecting means for [connecting] wiring said display and said computer, wherein said connecting means comprises an optical connecting device according to claim 44.

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